

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application.

Claims 1-20 stand rejected.

Claims 1, 8, 10, 15, 17 and 18 have been amended. Support for these amendments can be found throughout the specification and drawings as originally filed.

Reconsideration and reexamination of this application in light of the above amendments and the following remarks is respectfully requested.

REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 8, 9, 15, 16, 18 and 19 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Applicant respectfully traverses the 35 U.S.C. §112, second paragraph, rejection of claims 8, 9, 15, 16, 18 and 19.

In the interests of expediting prosecution of the instant application, and without admission that any amendment is necessary, claims 8, 15 and 18 have been amended to recite, among other things, that the abrasive grit is attached to the wheel by a method selected from the group consisting of brazing, electroplating, sintering, resin bonding, and combinations thereof. Therefore, claims 8, 15 and 18 are now definite and particularly point out and distinctly claim the subject matter which applicant regards as the invention. Furthermore, claims 9, 16 and 19, dependent upon claims 8, 15 and 18, respectively, are likewise definite and particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Accordingly, the Applicant submits that the 35 U.S.C. §112, second paragraph, rejection of claims 8, 9, 15, 16, 18 and 19 has been overcome.

REJECTION UNDER 35 U.S.C. §102(b)

Claims 1-4, 10 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,711,999 to Held.

The Applicant respectfully traverses the 35 U.S.C. §102(b) rejection of claims 1-4, 10 and 11.

The law is clear that anticipation requires that a single prior art reference disclose each and every limitation of the claim sought to be rejected. 35 U.S.C. 102(b).

The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers. 35 U.S.C. § 112 ¶ 4.

Claim 1 recites, among other things, a rotary edging wheel comprising: (1) a hub portion adapted for attachment to a rotary power source; (2) an outer circumferential cutting surface having a width, said surface including an abrasive grit attached thereto; (3) a radially extending planar side portion; and (4) at least one swarf clearing groove extending at an angle across the entire width of said surface and opening into said planar side, said swarf clearing groove operable to remove swarf out through said planar side; wherein said surface is operable for edge finishing of an optical lens.

Claim 10 recites, among other things, a rotary edging wheel comprising: (1) a hub portion adapted for attachment to a rotary power source; (2) an outer circumferential cutting surface having a width, said surface including an abrasive grit attached thereto, and having a circumferential groove therein for forming an edge contour onto an optical lens; (3) a

radially extending planar side portion; and (4) a plurality of swarf clearing grooves extending at an angle across the entire width of said surface and opening into said planar side, said swarf clearing grooves operable to remove swarf out through said planar side; wherein said surface is operable for edge finishing of an optical lens.

Held does not disclose such structure and function. In fact, Held only teaches that the so-called notch (12f) is for cooling purposes, and is completely silent regarding swarf removal. Furthermore, Held is also completely silent as to whether the circumferential cutting surface is operable to edge finish an optical lens.

Thus, independent claims 1 and 10 are patentable over Held for at least the reasons set forth above. Furthermore, claims 2-4 and 11, which depend from independent claims 1 and 10, respectively, further define the claimed invention and are likewise patentable over Held for at least the reasons set forth above.

Accordingly, the Applicant submits that the 35 U.S.C. §102(b) rejection of claims 1-4, 10 and 11 has been overcome.

Furthermore, the Applicant submits that U.S. Patent No. 3,711,999 to Held does not render claims 1-4, 10 and 11 obvious.

The standard for obviousness is that there must be some suggestion, either in the reference or in the relevant art, of how to modify what is disclosed to arrive at the claimed invention. In addition, "[s]omething in the prior art as a whole must suggest the desirability and, thus, the obviousness, of making" the modification to the art suggested by the Examiner. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). Although the Examiner may suggest the teachings of a primary reference could be modified to arrive at the claimed

subject matter, the modification is not obvious unless the prior art also suggests the desirability of such modification. *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d (BNA) 1397, 1398 (Fed. Cir.1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d (BNA) 1248 (Fed. Cir. 1989). If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990).

Reiterating, Held only discloses that the so-called notch (12f) is for cooling purposes, and is completely silent regarding swarf removal. In fact, Held does not disclose any swarf-clearing grooves in an outer cutting surface of a grinding wheel (regardless of their structure and/or orientation) and especially swarf-clearing grooves that extend along the entire width of the side surfaces of the grinding wheel. The notches disclosed by Held are merely for air-cooling purposes and not for material removal purposes. Assuming *arguendo* that the notches disclosed by Held were capable of performing a swarf clearing function, they would not be able to simultaneously perform the intended air-cooling function required by Held.

Furthermore, as previously noted, Held is also completely silent as to whether the circumferential cutting surface is operable to edge finish an optical lens. Held is primarily concerned with reducing frictional heating, thus indicating the material to be ground is most likely to be comprised of a material that is very difficult to easily and quickly grind (e.g., metals, ceramics, and the like). The present invention is more concerned with creating a

suitable edge finish on a much easier material to grind, i.e., optical lens materials, by facilitating swarf removal.

Thus, if one of ordinary skill in the art were attempting to form a swarf groove in a grinding wheel or tool, they most certainly would not look to Held for any guidance.

REJECTION UNDER 35 U.S.C. §103(a)

Claims 5-7, 12-14, 17 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,711,999 to Held.

The Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claims 5-7, 12-14, 17 and 20.

The Examiner correctly noted that Held does not disclose the specific attachment means, size, and hardness of the abrasive grit, as well as the orientation of the angles of the swarf clearing grooves.

As previously noted, independent claims 1 and 10 recite, among other things, a rotary edging wheel including at least one [or a plurality of] swarf clearing groove(s) extending at an angle across the entire width of the outer circumferential cutting surface and opening into the radially extending planar side, the swarf clearing groove(s) operable to remove swarf out through the planar side, wherein the surface is operable for edge finishing of an optical lens.

Again, Held does not suggest such structure and function. Reiterating, Held only discloses that the so-called notch (12f) is for cooling purposes, and is completely silent regarding swarf removal. Furthermore, as previously noted, Held is also completely silent as to whether the circumferential cutting surface is operable to edge finish an optical lens.

Thus, independent claims 1 and 10 are patentable over Held for at least the reasons set forth above. Furthermore, claims 5-7 and 12-14, which depend from independent claims 1 and 10, respectively, further define the claimed invention and are likewise patentable over Held for at least the reasons set forth above.

Independent claim 17 recites, among other things, a rotary bevel edging wheel comprising: (1) a hub portion adapted for attachment to a rotary power source; (2) an outer circumferential cutting surface having a width, said surface including an abrasive grit attached thereto, and having a circumferential groove therein for forming an edge contour onto an optical lens; (3) a radially extending planar side portion; and (4) a plurality of swarf clearing grooves extending across the entire width of said outer circumferential cutting surface, at an angle of from about 35 to about 45 degrees to said planar side portion and opening into said planar side, said swarf clearing grooves operable to remove swarf out through said planar side; wherein said surface is operable for edge finishing of an optical lens.

Again, Held does not suggest such structure and function. Reiterating, Held only discloses that the so-called notch (12f) is for cooling purposes, and is completely silent regarding swarf removal. Furthermore, as previously noted, Held is also completely silent as to whether the circumferential cutting surface is operable to edge finish an optical lens.

More importantly though, and as previously noted, Held does not disclose any swarf-clearing grooves in an outer cutting surface of a grinding wheel, and especially swarf-clearing grooves that extend along the entire width of the side surfaces of the grinding, and more especially swarf-clearing grooves that extend along the entire width of the side surfaces of the grinding wheel at specific angles. The notches disclosed by Held are

merely for air-cooling purposes and not for material removal purposes. Assuming *arguendo* that the notches disclosed by Held were capable of performing a swarf clearing function, they would not be able to simultaneously perform the intended air-cooling function required by Held. Thus, if one of ordinary skill in the art were attempting to form a swarf groove in a grinding wheel or tool, they most certainly would not look to Held for any guidance.

Thus, independent claim 17 is patentable over Held for at least the reasons set forth above. Furthermore, claim 20, which depends from independent claim 17, further defines the claimed invention and is likewise patentable over Held for at least the reasons set forth above.

Accordingly, the Applicant submits that the 35 U.S.C. §103(a) rejection of claims 5-7, 12-14, 17 and 20 has been overcome.

REJECTION UNDER 35 U.S.C. §103(a)

Claims 8, 9, 15, 16, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,711,999 to Held in view of U.S. Patent No. 5,997,597 to Hagan.

The Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claims 8, 9, 15, 16, 18 and 19.

As previously noted, the Examiner correctly noted that Held does not disclose the specific attachment means, size, and hardness of the abrasive grit, as well as the orientation of the angles of the swarf clearing grooves.

Additionally, the Applicants submit that Held does not render independent claims 1, 10 and 17 obvious for at least the reasons set forth above. The Examiner apparently cited Hagan to cure the deficiencies in the teachings of Held. However, Hagan does not disclose or suggest, among other things, a rotary edging wheel that is operable to edge finish an optical lens. In fact, Hagan appears to teach away from the claimed invention, in that he teaches that his abrasive tool is particularly well-suited to heavy duty grinding applications involving metal, concrete, stone, ceramics and the like.

Thus, independent claims 1, 10 and 17 are patentable over Held and/or Hagan, either alone or in combination therewith, for at least the reasons set forth above. Furthermore, claims 8, 9, 15, 16, 18 and 19, which depend from independent claims 1, 10 and 17, respectively, further define the claimed invention and are likewise patentable over Held and/or Hagan, either alone or in combination therewith, for at least the reasons set forth above.

Accordingly, the Applicant submits that the 35 U.S.C. §103(a) rejection of claims 8, 9, 15, 16, 18 and 19 has been overcome.

CONCLUSION

In view of the foregoing, the Applicant respectfully requests reconsideration and reexamination of the Application. The Applicant respectfully submits that each item raised by the Examiner in the Office Action of November 5, 2003 has been successfully traversed, overcome or rendered moot by this response. The Applicant respectfully submits that each of the claims in this Application is in condition for allowance and such allowance is earnestly solicited.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Please send all future correspondence relating to this application to Warn, Burgess & Hoffmann, P.C., P.O. Box 70098, Rochester Hills, MI 48307.


Respectfully submitted,

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